

CLAIMS

1. An electroluminescent display comprising  
a substrate,  
an electrode provided on the substrate,  
protrusions which each are provided on the  
substrate so as to cover the ends of the electrode and  
are convexly curved in section relatively to the surface  
of the substrate, and

an electroluminescent layer provided in each  
opening which is located on the electrode and defined by  
adjacent protrusions.

2. The electroluminescent display according to  
claim 1, wherein the electroluminescent layer in its  
part around the boundary between the electroluminescent  
layer and the protrusion is in contact with the  
protrusion in such a state that the electroluminescent  
layer is curved in section in a direction opposite to  
the convexly curved protrusion.

3. The electroluminescent display according to  
claim 1, wherein the electroluminescent layer in its  
part around the boundary between the electroluminescent  
layer and the protrusion is in smooth and continuous  
contact with the protrusion.

4. The electroluminescent display according to  
claim 1, wherein the sectional form of the protrusion  
comprises a part of an arc.

5. The electroluminescent display according to  
claim 1, wherein the sectional form of the protrusion  
comprises a part of an arc and a flat part as an upper  
part which is extended continuously from the arc part.

6. The electroluminescent display according to  
claim 1, wherein the thickness of the protrusion is not  
less than 5  $\mu\text{m}$ .

7. A process for producing an electroluminescent  
display, comprising the step of  
forming an organic layer including at least an

electroluminescent layer on the surface of the substrate with protrusions provided thereon as defined in any one of claims 1 to 6 by a wet process selected from an ink jet method, a printing method, a casting method, an alternating adsorption method, a spin coating method, a dipping method, and a dispenser method.

8. An electronic equipment comprising the display according to any one of claims 1 to 6 as a display part.

9. A pattern formed object comprising:

a substrate;

partition walls provided on the substrate; and

a coating formed on the substrate in its part between the partition walls, wherein

said partition walls have a liquid-nonrepellent surface and have such a sectional form that, at least in the lower part of the partition wall, as the distance from the substrate increases, the size of the partition wall in a direction parallel to the substrate decreases, and

in said coating, the ratio of the maximum thickness ( $T_{max}$ ) to the minimum thickness ( $T_{min}$ ),  $T_{max}/T_{min}$ , is not more than 130% as measured in the coating in its part between the lower ends of the partition walls adjacent to each other.

10. The pattern formed object according to claim 9, wherein the angle of the lower part of the partition wall to the substrate is not more than 60 degrees.

11. The pattern formed object according to claim 10, wherein each of the partition walls comprises a lower partition wall structure, which is provided on the substrate side and is in the form of a trapezoid, in section, with the long side being located on the substrate side, and an upper partition wall structure provided on the lower partition wall structure.

12. The pattern formed object according to claim 11, wherein the angle of the slope of the lower partition wall structure to the substrate is not more than 30

degrees.

13. The pattern formed object according to claim 11, wherein the distance between the lower part of the upper partition wall structure and the end of the lower partition wall structure on its substrate side as measured in a direction parallel to the substrate is not less than  $1\text{ }\mu\text{m}$ .

14. The pattern formed object according to claim 11, wherein the height  $H_1$  of the lower partition wall structure as measured in a direction perpendicular to the substrate and the height  $H_2$  of the upper partition wall structure satisfy a requirement represented by  $H_2 > 2 \times H_1 > 0.1\text{ }\mu\text{m}$ .

15. A pattern formed object for an electroluminescent element, comprising the pattern formed object according to any one of claims 9 to 14, said coating being an EL light emitting layer interposed between a first electrode and a second electrode.

16. The pattern formed object for an electroluminescent element according to claim 15, wherein said EL light emitting layer has a hole injection layer stacked on its substrate side.

17. A method for pattern formation, comprising the steps of:

forming, on a substrate, partition walls which have a liquid-nonrepellent surface and have such a sectional form that, at least in the lower part of the partition wall, as the distance from the substrate increases, the size of the partition wall in a direction parallel to the substrate decreases;

applying a coating liquid onto the substrate in its part between the partition walls adjacent to each other; and

drying and solidifying the coating to form a solidified coating of which the ratio of the maximum thickness ( $T_{\text{max}}$ ) to the minimum thickness ( $T_{\text{min}}$ ),  $T_{\text{max}}/T_{\text{min}}$ , is not more than 130% as measured in the

coating in its part between the lower ends of the partition walls adjacent to each other.

18. The method for pattern formation according to claim 17, wherein said partition wall is formed by forming a lower partition wall structure, which is provided on the substrate side and is in the form of a trapezoid, in section, with the long side being located on the substrate side, and then forming an upper partition wall structure provided on the lower partition wall structure.

19. A method for pattern formation for an electroluminescent element, comprising the steps of:

forming a first electrode on a substrate;

forming partition walls according to the method as defined in claim 17;

forming a coating as an EL light emitting layer using a coating liquid for EL light emitting layer formation according to the method as defined in claim 17; and

forming a second electrode on the EL light emitting layer.

20. The method for pattern formation for an electroluminescent element according to claim 19, wherein the coating liquid for EL light emitting layer formation is applied by a dispenser method or an ink jet method.

21. The method for pattern formation for an electroluminescent element according to claim 19 or 20, wherein, prior to the formation of the EL light emitting layer, a hole injection layer is formed in a space between the partition walls adjacent to each other.

22. The method for pattern formation for an electroluminescent element according to claim 19 or 20, wherein, prior to the formation of the EL light emitting layer, a hole injection layer is formed on the whole area of the assembly including the upper surface of the partition walls.